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### Investigation the injury incidence in school students of Babol city (Iran)

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#### ABSTRACT

Humans physical, biological, sexual, psychological and social dimensions are deeply coherent with each other and ignoring this harmony can precipitate the incidence of injury. This study investigated the relationship between some personality characteristics of a student's dealing with injuries school students in Babol city. Incidence of injury of 300 junior and high school students of Babol city were examined (surveyed, monitored) during one year. Each student completed a questionnaire at the beginning of the academic year while another injury questionnaire regarding all injuries occurring at school was completed during the year. Data was analyzed using SAS software and  $\chi^2$  independent statistical test ( $\alpha \leq 0.05$ ). During the implementation of this study, 20.6% of students suffered from single injury and another 12.3% of them a frequent one. This was mostly related to students frequent injury use of psychotropic drugs and low academic grades. The prevalence of single injuries was relevant to lower age, lack of one or both of parents, distress and getting agitated easily. Meanwhile the prevalence of frequent injury was highly correlated to a lower age, frequent use of psychotropic drugs, lower academic grades, angriness, care freeness, distress and anxiety (95% confidence interval). The results indicate that exceeding incidence of school injures is related to frequent use of psychotropic drugs, lower academic grades, parental absence and personality. So school exercise teachers should take appropriate measures to inform students and parents.

**Keywords:** School Student's Injury, Academic Grades, Effective Factors, Parental Absence, Psychotropic Drugs, Personality.

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#### INTRODUCTION

During the passage of a youngish period that person aged 20-11 years from childhood to adult period. Huge changes in physiological, psychological and social crisis in the life of a teenager that the dependence of the phase during which parents passes to the independency [1]. The youth period associated with crisis, stress and different injury and different physical dimensions

(physical, biological, sexual, psychological and social) have a close relationship and have mutual influence on each other. Today in Iranian schools, the types and prevalence of injuries and often social have an impacts such as heavy economic of hospitals and absenteeism in the classroom [2,3].

Many young people in a short period of time, may have more than one injury in the school [2,4,5]. This type of injury are related to situation, environment and personality characteristics, such as age, gender, physical ability, lack of knowledge, behavior and family characteristics [2,6,7,8,9]. Smoking, alcohol consumption and sleep disturbances can affect people's physical and mental abilities and increase risk of injury in youth. From the other dimensions; students grades in school may be associated with severity of injury, because students Scores can represents the capacity of students to do some identified school works [10,11].

Awareness of the role of these factors can be useful for prevention of school injury for increasing physical education teacher's information, parents and school personnel in regards to the risks of injury. Hawk and his colleagues (1999) stated that student injuries in boys are higher than girls. Based on this study, age increasing in boys related to incidence of injury [12]. Based on the long-term research was performed on the Swedish school in 79 students, Injury prevalence in boys aged 10 to 15 was higher than their peers in girls. While the incidence of injury in girls 7-12 years old were more often male peers, also the occurrence of the injury in guidance school was 52%, while in high school students, this amount was 62%. These results show that with age increasing, the rate of injury is more in both sexes (male and female) [13]. Chen and colleagues studies showed that classmates also play a role in injury incidence because of contacts.

Bolt corrosion, sprain, muscle strain, fractures, is common injury in students and typically, the incidence of fractures in girls are three times more boys students. Also injury causing consciousness to the head in boys is two times higher than girls [15]. A study in Iran showed that children with greater depression have low efficiency in various academic, body and ability to finding friend dimensions [16]. Look at the reviews carried out indicate that cognitive perspective, confirmed effect of cognitive factors on the incidence of physical and psychological pathology and cause and the cognitive processes among the cognitive, psychological and physical damage agents in children are stressed. Unfortunately few studies on the incidence of school injury be done [2,6,7,13,19-21].

Most studies compare only a few injuries in both sexes [22,23]. In this regard, this study will address this issue whether factors such as age, academic grades, smoking, drugs and mental battalion, personality traits and family characteristics can Cause injury in secondary school students of Babol city or not?

## **MATERIAL AND METHODS**

Study designs are a quasi-experimental. Study population was 300 students from high and guidance schools of Babol city that during one year were studied.

### **Design**

This study practical plan includes the following: At the beginning of the academic year, a letter to the parents have been adjusted to agree to participate in this study, then reiterated in school physical education teachers was delivered to students. Three weeks later, subjects were given a

standard questionnaire that completed without writing his name and under the supervision of physical education teacher.

These questionnaire were included: student number, sex, date of birth, height, weight, smoking habits, consumption of illegal drugs (often/ sometimes/ rarely/ never), psychiatric drugs battalion during the past 12 months (for headache, fatigue, anger, anxiety), fatigue during the day (often/ sometimes/ rarely/ never), personality characteristics, family characteristics and the absence of parents in the home for more than 24 hours (often/ sometimes/ rarely/ never), respectively. With regard to personality traits, subjects status to the seriousness, calmness, fear and anger were studied in (yes/ no) form [9,10,25].

**Statistical Analysis:** Data was analyzed using SAS software and  $\chi^2$  independent statistical test ( $\alpha \leq 0.05$ ).

## RESULTS

52% of subjects in the study were boys. Of these, 40 students have less than 12 years, 64 students 13 to 14 years, 103 students and 93 students 15 to 16 years over 17 years of age. 3.1% of students are overweight, and 3.7% of students had weight loss. 20.7% of students smoked. 44.1% of subjects were fatigued during the day and 3.6% of the subjects were consumed major amount of recreational drugs. Most people (80.1%) were living with their parents and 38.7% of the people, their parents, often for more than 24 hours outside the home. More than 29.9% of individuals in their annual achievement scores were less than 12. The personality characteristics have been reported, 51.8% of people, many people were angry, 65.9% of people had concerns, 54.2% weren't calm, and 45.3% were not serious.

120 injuries among the participants in this study was reported during an academic year. 20.6% of people injured in single and 3 / 12% were overuse injury. 61.9% of injuries during exercise or physical activity, 14.2% during recreation and 23.9% occurred while performing other activities.

Common injury was: Sports Hall (43.9%), Football field (31.6%), Class (7%) and other cases (17.5%).

These injuries mechanisms include: Contact with ball or rocket (19%), dealing with other people (23.4%), falls (15.6%), Collisions with fixed objects such as walls or columns (9.29%), falling after jumping (6%) and others (26.8%). Most absences from school were 3 to 5 days. The average number of absence from exercise and physical activity was 3.4 days. In the longer period of absence from exercise and physical activity lasting 14 days or more and the average number of days in the absence of exercise 20.9 was.

**Physical injury includes:** Contusion (38.2%), bleeding (20.7%), tendon strain (9.2 9%), strain (23.2%), Fracture (1%) and others (7.7%) had among that, Finger (22.1%), other parts of the hand(5.4%), wrist (8.2%), forearm (4.8%), elbow (9.6%), Arm (2.58%), shoulder joint (6.4%), ankles (10.6%), foot (3.6%), lower extremity (2%), knee (14.7%), hip (4.8%), neck and trunk (5.3%) were injured.

Single incidence of injury significantly is related with age and recreational drugs. There is a significant relationship between the lower mean scores for the study, regular consumption of recreational drugs, early aggression, lack of seriousness, and calm anxiety and chronic injury.

Injury incidence are related to lower age with overuse trauma (2.12- 4.96), use of psychiatric drugs in Battalion (1.53- 5.34) and lower academic scores (1.3- 5.12), anger (1.89- 5.23), Lack of seriousness (1.13- 4.56), calmness (1.81- 3.87) and fears (1.12-510). there is a weak quantitative relationship between lower age with a single injury (1.17- 2.65) and high consumption of psychiatric drugs in Battalion (1.34- 2.89). Also absent parent (1.67-2.43), calmness (1.34- 2.89) and get angry easily (1.14- 2.13) also is related.

## DISCUSSION AND CONCLUSION

As study results indicated incidence of overuse injuries was more frequent and have high correlation with low ages, more frequent use of psychiatric drugs in Battalion, lower academic scores than individuals, the rapid onset of anger, not fear, is calm and serious. Single damage, has Lesley connected with the age and use of recreational drugs and is also related to the absence of parents and marital life, the calm and not easily angered. It is necessary to note that all factors in past studies were used to validated [24.9]. Sectors that used to personality assess, due to this simplicity and relation between injury incidence with increased smoking and illegal drugs, [9,10, 25].

In this study observed damage in the school students is abundance and injury frequency is higher than the reports than other researchers [27.26] which are less than Yang and colleagues reported amounts [7]. The difference between the studies can be due to the number of subjects to be studied [7,22,26].

In seems the incidence of injury in children less than 14 years is very high. The situation described by the students affected, Most injuries caused by sports and physical activities, due to low attention, low inexperience, inexperienced, high sensitivity, the ability to ignore physical education instructors and may many young people Not have, complex motor skills needed for sports and activities that is characterized by various physical [28].

Based on this study results we found that, when all factors are considered, use of recreational drugs are much more closely associated with chronic injury. The drug consumption cans the physical and mental capacities of people thus may lead to injury [24].

When injury is continuous, may also increase the severity of injury. Greater medication among the students, be created despite the physical pain and may increase the risk of injury [19]. If you should continue cause of the injury will be severe. Plenty mental battalion drugs consumption finally led to sever injury. 52% of subjects in the study were boys. Of these, 40 students have less than 12 years, 64 students 13 to 14 years, 103 students and 93 students 15 to 16 years over 17 years of age. 3.1% of students are overweight, and 3.7% of students had weight loss. 20.7% of students smoked. 44.1% of subjects were fatigued during the day and 3.6% of the subjects were consumed major amount of recreational drugs. Most people (80.1%) were living with their parents and 38.7% of the people, their parents, often for more than 24 hours outside the home. More than 29.9% of individuals in their annual achievement scores were less than 12. The personality characteristics have been reported, 51.8% of people, many people were angry, 65.9% of people had concerns, 54.2% weren't calm, and 45.3% were not serious.

Sports Hall (43.9%), Football field (31.6%), Class (7%) and other cases (17.5%). These injuries mechanisms include: Contact with ball or rocket (19%), dealing with other people (23.4%), falls (15.6%), collisions with fixed objects such as walls or columns (9.29%), falling after jumping (6%) and others (26.8%).

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This study results indicates, the risk of injury in schools is high and should be reduced. Given the higher risk in adolescence and youth, it is recommended that physical activity, sports, law, environment, equipment must be in accordance with the abilities of students. In that case, exercise and physical activity is essential with exercise. Reported increased risk of injury is related with the use of psychiatric drugs in Battalion, more low academic scores, behavior and personality of the parents and sports instructors should to notify necessary instructions.

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